

Listing of the Claims:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1 1. (Currently Amended) A flame arrestor for a flowing explosive gas (4), having a
2 disk structure with a front face and a back face, the disk structure comprising:
3 structure forming multiple concentric rings of first gas passages, about a
4 longitudinal axis in a flow direction, extending from the front face to the back face,
5 said first gas passages each having a cross-sectional area, normal to the flow
6 direction, larger than a given value; and
7 structure forming at least one ring of second gas passages, said ring being
8 substantially concentric with said multiple concentric rings of first gas passages, said
9 second gas passages extending in the flow direction and each having a cross-
10 sectional area, normal to the flow direction, less than the given value,
11 wherein said multiple concentric rings of first gas passages and said at least
12 one ring of second gas passages are arranged in an alternating pattern, such that
13 said at least one ring of said second gas passages surrounds at said at least one
14 ring of said first gas passages
15 having a flame barrier (10, 20, 30) with a large number of defined passage gaps (17,
16 18), whose gap cross section is set with regard to the properties of the flowing gas
17 (4), characterized in that second gaps (18) with a smaller gap cross section are
18 arranged adjacent to the first gaps (17) having the selected gap cross section.

2-4. (Canceled)

1 5. (Currently Amended) The flame arrestor of as claimed in claim 1 xx4xx, wherein
2 said structure forming at least one ring of second gas passages forms multiple
3 concentric rings of said second gas passages, and

4 wherein said characterized in that a turn (12) having multiple concentric rings
5 of first gas passages gaps (17) and said multiple concentric rings of a turn (13)
6 having second gas passages gaps (18) are arranged in an alternating pattern of
7 each of said concentric rings of first gas passages being between and concentric
8 with rings of said second gas passages provided alternately.

1 6. (Currently Amended) The flame arrestor of as claimed in claim 1 ~~xx3xx~~, wherein
2 the structure forming said multiple concentric rings of first gas passages
3 characterized in that the disk-like flame barrier is formed by includes a first
4 corrugated metal strip wound spirally with a smooth metal strip, and the structure
5 forming said at least one ring of second gas passages includes a second corrugated
6 metal strip wound spirally with a smooth metal strip, a the first corrugated metal strip
7 having larger corrugations than the second forming the turns having the first gaps
8 and a corrugated metal strip having smaller corrugations forming the turns having
9 the second gaps.

7-9. (Canceled).

1 10. (Currently Amended) The flame arrestor of as claimed in claim 1, wherein said
2 structure forming at least one ring of second gas passages forms multiple concentric
3 rings of said second gas passages, and
4 wherein characterized in that the ratio of the number of rings of said second
5 gas passages gaps to the number of rings of said first gas passages gaps varies
6 over the area of the flame barrier.

1 11. (Currently Amended) The flame arrestor of as claimed in claim 10, wherein
2 characterized in that the ratio of the number of rings of said second gas passages
3 gaps (18) to the number of rings of said first gas passages gaps (17) decreases
4 corresponding to the radial distance from said longitudinal axis from inside to
5 outside.

1 12. (Currently Amended) The flame arrestor ~~of as claimed~~ in claim 1, characterized
2 in that the second gas passages ~~gaps~~ all have the same gap cross sections.

1 13. (Currently Amended) The flame arrestor ~~of as claimed~~ in claim 1, wherein
2 ~~characterized in that~~ at least one of the second gas passages has a cross sectional
3 area different from a cross sectional area of another of said second gas passages
4 ~~gaps are formed with a~~ with at least two different gap cross sections.

1 14. (Currently Amended) The flame arrestor ~~of as claimed~~ in claim 1, wherein
2 characterized in that the first and second gaps are formed with the same gap
3 lengths.

1 15. (Currently Amended) The flame arrestor ~~of as claimed~~ in claim 1, characterized
2 in that the cross-sectional area of the second gas passages is not greater than gaps
3 ~~amounts to at most~~ 50% of the cross-sectional area of the first gas passages gaps.